

SEQUENCE LISTING

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WU, Jiong

<120> ANTIBODIES SPECIFIC FOR PHOSPHORYLATED IRS-1/2 (Ser1101/Ser1149) AND USES THE
REOF

<130> CST-209

<140> Not yet assigned

<141> 2003-10-28

<150> US 60/422,409

<151> 2002-10-30

<160> 11

<170> PatentIn version 3.1

<210> 1

<211> 1242

<212> PRT

<213> Homo sapiens

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Asn Glu Lys Lys Trp Arg His Lys Ser Ser Ala Pro Lys Arg Ser Ile
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Pro Leu Glu Ser Cys Phe Asn Ile Asn Lys Arg Ala Asp Ser Lys Asn
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Lys His Leu Val Ala Leu Tyr Thr Arg Asp Glu His Phe Ala Ile Ala
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Leu His Asn Arg Ala Lys Gly His His Asp Gly Ala Ala Ala Leu Gly
115 120 125

Ala Gly Gly Gly Gly Gly Ser Cys Ser Gly Ser Ser Gly Leu Gly Glu
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Ala Gly Glu Asp Leu Ser Tyr Gly Asp Val Pro Pro Gly Pro Ala Phe
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Lys Glu Val Trp Gln Val Ile Leu Lys Pro Lys Gly Leu Gly Gln Thr
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Ser Phe Val Lys Leu Asn Ser Glu Ala Ala Ala Val Val Leu Gln Leu
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Met Asn Ile Arg Arg Cys Gly His Ser Glu Asn Phe Phe Phe Ile Glu
210 215 220

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Met Arg Ala Met Ser Asp Glu Phe Arg Pro Arg Ser Lys Ser Gln Ser
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Ser Ser Asn Cys Ser Asn Pro Ile Ser Val Pro Leu Arg Arg His His
275 280 285

Leu Asn Asn Pro Pro Pro Ser Gln Val Gly Leu Thr Arg Arg Ser Arg
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Thr Glu Ser Ile Thr Ala Thr Ser Pro Ala Ser Met Val Gly Gly Lys
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Pro Gly Ser Phe Arg Val Arg Ala Ser Ser Asp Gly Glu Gly Thr Met
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Ser Arg Pro Ala Ser Val Asp Gly Ser Pro Val Ser Pro Ser Thr Asn
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Arg Thr His Ala His Arg His Arg Gly Ser Ala Arg Leu His Pro Pro
355 360 365

Leu Asn His Ser Arg Ser Ile Pro Met Pro Ala Ser Arg Cys Ser Pro
 370 375 380

Ser Ala Thr Ser Pro Val Ser Leu Ser Ser Ser Thr Ser Gly His
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Gly Ser Thr Ser Asp Cys Leu Phe Pro Arg Arg Ser Ser Ala Ser Val
 405 410 415

Ser Gly Ser Pro Ser Asp Gly Gly Phe Ile Ser Ser Asp Glu Tyr Gly
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Ser Ser Pro Cys Asp Phe Arg Ser Ser Phe Arg Ser Val Thr Pro Asp
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Ser Leu Gly His Thr Pro Pro Ala Arg Gly Glu Glu Glu Leu Ser Asn
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Gly Gly Gly Tyr Cys Gly Ala Arg Leu Glu Pro Ser Leu Pro His Pro
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Gln Gln Pro Leu Leu His Pro Pro Glu Pro Lys Ser Pro Gly Glu Tyr
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915 920 925

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Asp Leu Gly Pro Gly Arg Arg Ala Ala Trp Gln Glu Ser Thr Gly Val
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Glu Met Gly Arg Leu Gly Pro Ala Pro Pro Gly Ala Ala Ser Ile Cys
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 1160 1165 1170

Glu Asn Gly Leu Asn Tyr Ile Asp Leu Asp Leu Val Lys Asp Phe
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Lys Gln Cys Pro Gln Glu Cys Thr Pro Glu Pro Gln Pro Pro Pro
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 <213> Homo sapiens

<400> 2

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 35 40 45
 Val Leu Arg Gly Pro Gly Ala Gly Gly Asp Lys Ala Thr Ala Gly Gly
 50 55 60
 Gly Ser Ala Pro Gln Pro Pro Arg Leu Glu Tyr Tyr Glu Ser Glu Lys
 65 70 75 80
 Asn Trp Arg Ser Lys Ala Gly Ala Pro Lys Arg Val Ile Ala Leu Asp
 85 90 95
 Cys Cys Leu Asn Ile Asn Lys Arg Ala Asp Pro Lys His Lys Tyr Leu
 100 105 110
 Ile Ala Leu Tyr Thr Lys Asp Glu Tyr Phe Ala Val Ala Ala Glu Asn
 115 120 125
 Glu Gln Glu Gln Glu Gly Trp Tyr Arg Ala Leu Thr Asp Leu Val Ser
 130 135 140
 Glu Gly Arg Ala Ala Ala Gly Asp Ala Pro Pro Ala Ala Ala Pro Ala
 145 150 155 160
 Ala Ser Cys Ser Ala Ser Leu Pro Gly Ala Val Gly Gly Ser Ala Gly
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 Ala Ala Gly Ala Glu Asp Ser Tyr Gly Leu Val Ala Pro Ala Thr Ala
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 Ala Tyr Arg Glu Val Trp Gln Val Asn Leu Lys Pro Lys Gly Leu Gly
 195 200 205
 Gln Ser Lys Asn Leu Thr Gly Val Tyr Arg Leu Cys Leu Ser Ala Arg
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 225 230 235 240
 Gln Leu Met Asn Ile Arg Arg Cys Gly His Ser Asp Ser Phe Phe Phe
 245 250 255
 Ile Glu Val Gly Arg Ser Ala Val Thr Gly Pro Gly Glu Leu Trp Met
 260 265 270

Gln Ala Asp Asp Ser Val Val Ala Gln Asn Ile His Glu Thr Ile Leu
 275 280 285

Glu Ala Met Lys Ala Leu Lys Glu Leu Phe Glu Phe Arg Pro Arg Ser
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Lys Ser Gln Ser Ser Gly Ser Ser Ala Thr His Pro Ile Ser Val Pro
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 325 330 335

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Ala Ala Lys Cys Ser Ser Cys Arg Val Arg Thr Ala Ser Glu Gly Asp
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Val Ala Gly Ser Pro Leu Ser Pro Gly Pro Val Arg Ala Pro Leu Ser
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Arg Ser His Thr Leu Ile Gly Gly Cys Arg Ala Ala Gly Thr Lys Trp
 405 410 415

His Cys Phe Pro Ala Gly Gly Gly Leu Gln His Ser Arg Ser Met Ser
 420 425 430

Met Pro Val Glu His Leu Pro Pro Ala Ala Thr Ser Pro Gly Ser Leu
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Ser Ser Ser Ser Asp His Gly Trp Gly Ser Tyr Pro Pro Pro Pro Gly
 450 455 460

Pro His Pro Leu Leu Pro His Pro Leu His His Gly Pro Gly Gln Arg
 465 470 475 480

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 485 490 495

Phe Met Ser Leu Asp Glu Tyr Gly Ser Ser Pro Gly Asp Leu Arg Ala
 500 505 510

Phe Cys Ser His Arg Ser Asn Thr Pro Glu Ser Ile Ala Glu Thr Pro
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Met Asp Arg Pro Leu Ser His Cys Gly Arg Ser Tyr Arg Arg Val Ser
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Gly Asp Ala Ala Gln Asp Leu Asp Arg Gly Leu Arg Lys Arg Thr Tyr
565 570 575

Ser Leu Thr Thr Pro Ala Arg Gln Arg Pro Val Pro Gln Pro Ser Ser
580 585 590

Ala Ser Leu Asp Glu Tyr Thr Leu Met Arg Ala Thr Phe Ser Gly Ser
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Ala Gly Arg Leu Cys Pro Ser Cys Pro Ala Ser Ser Pro Lys Val Ala
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Tyr His Pro Tyr Pro Glu Asp Tyr Gly Asp Ile Glu Ile Gly Ser His
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Thr Pro Gly Ala Ala Leu Ala Gly Ser Gly Ser Gly Ser Cys Arg Ser
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Asp Asp Tyr Met Pro Met Ser Pro Ala Ser Val Ser Ala Pro Lys Gln
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Pro Glu Asp Ser Gly Tyr Met Arg Met Trp Cys Gly Ser Lys Leu Ser
740 745 750

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 755 760 765

Val Ser Pro Ser Asp Ala Val Thr Thr Gly Thr Pro Pro Asp Phe Phe
 770 775 780

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 785 790 795 800

Cys Cys Tyr Ser Ser Leu Pro Arg Ser Tyr Lys Ala Pro Tyr Thr Cys
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Gly Gly Asp Ser Asp Gln Tyr Val Leu Met Ser Ser Pro Val Gly Arg
 820 825 830

Ile Leu Glu Glu Glu Arg Leu Glu Pro Gln Ala Thr Pro Gly Pro Thr
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Gln Ala Ala Ser Ala Phe Gly Ala Gly Pro Thr Gln Pro Pro His Pro
 850 855 860

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Leu Gly Gln Arg Gly Arg Ala Val Arg Pro Thr Arg Leu Ser Leu Glu
 885 890 895

Gly Leu Pro Ser Leu Pro Ser Met His Glu Tyr Pro Leu Pro Pro Glu
 900 905 910

Pro Lys Ser Pro Gly Glu Tyr Ile Asn Ile Asp Phe Gly Glu Pro Gly
 915 920 925

Ala Arg Leu Ser Pro Pro Ala Pro Pro Leu Leu Ala Ser Ala Ala Ser
 930 935 940

Ser Ser Ser Leu Leu Ser Ala Ser Ser Pro Ala Leu Ser Leu Gly Ser
 945 950 955 960

Gly Thr Pro Gly Thr Ser Ser Asp Ser Arg Gln Arg Ser Pro Leu Ser
 965 970 975

Asp Tyr Met Asn Leu Asp Phe Ser Ser Pro Lys Ser Pro Lys Pro Gly
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Ala Pro Ser Gly His Pro Val Gly Ser Leu Asp Gly Leu Leu Ser Pro
 995 1000 1005

Glu Ala Ser Ser Pro Tyr Pro Pro Leu Pro Pro Arg Pro Ser Ala
 1010 1015 1020

Ser Pro Ser Ser Ser Leu Gln Pro Pro Pro Pro Pro Pro Ala Pro
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Gly Glu Leu Tyr Arg Leu Pro Pro Ala Ser Ala Val Ala Thr Ala
 1040 1045 1050

Gln Gly Pro Gly Ala Ala Ser Ser Leu Ser Ser Asp Thr Gly Asp
 1055 1060 1065

Asn Gly Asp Tyr Thr Glu Met Ala Phe Gly Val Ala Ala Thr Pro
 1070 1075 1080

Pro Gln Pro Ile Ala Ala Pro Pro Lys Pro Glu Ala Ala Arg Val
 1085 1090 1095

Ala Ser Pro Thr Ser Gly Val Lys Arg Leu Ser Leu Met Glu Gln
 1100 1105 1110

Val Ser Gly Val Glu Ala Phe Leu Gln Ala Ser Gln Pro Pro Asp
 1115 1120 1125

Pro His Arg Gly Ala Lys Val Ile Arg Ala Asp Pro Gln Gly Gly
 1130 1135 1140

Arg Arg Arg His Ser Ser Glu Thr Phe Ser Ser Thr Thr Thr Val
 1145 1150 1155

Thr Pro Val Ser Pro Ser Phe Ala His Asn Pro Lys Arg His Asn
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Ser Ala Ser Val Glu Asn Val Ser Leu Arg Lys Ser Ser Glu Gly
 1175 1180 1185

Gly Val Gly Val Gly Pro Gly Gly Gly Asp Glu Pro Pro Thr Ser
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Pro Arg Gln Leu Gln Pro Ala Pro Pro Leu Ala Pro Gln Gly Arg
 1205 1210 1215

Pro Trp Thr Pro Gly Gln Pro Gly Gly Leu Val Gly Cys Pro Gly
1220 1225 1230

Ser Gly Gly Ser Pro Met Arg Arg Glu Thr Ser Ala Gly Phe Gln
1235 1240 1245

Asn Gly Leu Lys Tyr Ile Ala Ile Asp Val Arg Glu Glu Pro Gly
1250 1255 1260

Leu Pro Pro Gln Pro Gln Pro Pro Pro Pro Pro Leu Pro Gln Pro
1265 1270 1275

Gly Asp Lys Ser Ser Trp Gly Arg Thr Arg Ser Leu Gly Gly Leu
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<213> Mus musculus

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35 40 45

Asn Glu Lys Lys Trp Arg His Lys Ser Ser Ala Pro Lys Arg Ser Ile
50 55 60

Pro Leu Glu Ser Cys Phe Asn Ile Asn Lys Arg Ala Asp Ser Lys Asn
65 70 75 80

Lys His Leu Val Ala Leu Tyr Thr Arg Asp Glu His Phe Ala Ile Ala
Page 12

85

90

95

Ala Asp Ser Glu Ala Glu Gln Asp Ser Trp Tyr Gln Ala Leu Leu Gln
 100 105 110

Leu His Asn Arg Ala Lys Ala His His Asp Gly Ala Gly Gly Gly Cys
 115 120 125

Gly Gly Ser Cys Ser Gly Ser Ser Gly Val Gly Glu Ala Gly Glu Asp
 130 135 140

Leu Ser Tyr Asp Thr Gly Pro Gly Pro Ala Phe Lys Glu Val Trp Gln
 145 150 155 160

Val Ile Leu Lys Pro Lys Gly Leu Gly Gln Thr Lys Asn Leu Ile Gly
 165 170 175

Ile Tyr Arg Leu Cys Leu Thr Ser Lys Thr Ile Ser Phe Val Lys Leu
 180 185 190

Asn Ser Glu Ala Ala Ala Val Val Leu Gln Leu Met Asn Ile Arg Arg
 195 200 205

Cys Gly His Ser Glu Asn Phe Phe Phe Ile Glu Val Gly Arg Ser Ala
 210 215 220

Val Thr Gly Pro Gly Glu Phe Trp Met Gln Val Asp Asp Ser Val Val
 225 230 235 240

Ala Gln Asn Met His Glu Thr Ile Leu Glu Ala Met Arg Ala Met Ser
 245 250 255

Asp Glu Phe Arg Pro Arg Ser Lys Ser Gln Ser Ser Ser Ser Cys Ser
 260 265 270

Asn Pro Ile Ser Val Pro Leu Arg Arg His His Leu Asn Asn Pro Pro
 275 280 285

Pro Ser Gln Val Gly Leu Thr Arg Arg Ser Arg Thr Glu Ser Ile Thr
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Ala Thr Ser Pro Ala Ser Met Val Gly Gly Lys Pro Gly Ser Phe Arg
 305 310 315 320

Val Arg Ala Ser Ser Asp Gly Glu Gly Thr Met Ser Arg Pro Ala Ser

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330

335

Val Asp Gly Ser Pro Val Ser Pro Ser Thr Asn Arg Thr His Ala His
 340 345 350

Arg His Arg Gly Ser Ser Arg Leu His Pro Pro Leu Asn His Ser Arg
 355 360 365

Ser Ile Pro Met Pro Ser Ser Arg Cys Ser Pro Ser Ala Thr Ser Pro
 370 375 380

Val Ser Leu Ser Ser Ser Ser Thr Ser Gly His Gly Ser Thr Ser Asp
 385 390 395 400

Cys Leu Phe Pro Arg Arg Ser Ser Ala Ser Val Ser Gly Ser Pro Ser
 405 410 415

Asp Gly Gly Phe Ile Ser Ser Asp Glu Tyr Gly Ser Ser Pro Cys Asp
 420 425 430

Phe Arg Ser Ser Phe Arg Ser Val Thr Pro Asp Ser Leu Gly His Thr
 435 440 445

Pro Pro Ala Arg Gly Glu Glu Glu Leu Ser Asn Tyr Ile Cys Met Gly
 450 455 460

Gly Lys Gly Ala Ser Thr Leu Ala Ala Pro Asn Gly His Tyr Ile Leu
 465 470 475 480

Ser Arg Gly Gly Asn Gly His Arg Tyr Ile Pro Gly Ala Asn Leu Gly
 485 490 495

Thr Ser Pro Ala Leu Pro Gly Asp Glu Ala Ala Gly Ala Ala Asp Leu
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Asp Asn Arg Phe Arg Lys Arg Thr His Ser Ala Gly Thr Ser Pro Thr
 515 520 525

Ile Ser His Gln Lys Thr Pro Ser Gln Ser Ser Val Ala Ser Ile Glu
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Gly Gly Arg Leu Pro Gly Tyr Arg His Ser Ala Phe Val Pro Thr His

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570

575

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595 600 605

Met Pro Met Ser Pro Gly Val Ala Pro Val Pro Ser Asn Arg Lys Gly
610 615 620

Asn Gly Asp Tyr Met Pro Met Ser Pro Lys Ser Val Ser Ala Pro Gln
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Gln Ile Ile Asn Pro Ile Arg Arg His Pro Gln Arg Val Asp Pro Asn
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Gly Tyr Met Met Met Ser Pro Ser Gly Ser Cys Ser Pro Asp Ile Gly
660 665 670

Gly Gly Ser Ser Ser Ser Ser Ser Ile Ser Ala Ala Pro Ser Gly Ser
675 680 685

Ser Tyr Gly Lys Pro Trp Thr Asn Gly Val Gly Gly His His Thr His
690 695 700

Ala Leu Pro His Ala Lys Pro Pro Val Glu Ser Gly Gly Gly Lys Leu
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740 745 750

His Lys Pro Val Leu Ser Tyr Tyr Ser Leu Pro Arg Ser Phe Lys His
755 760 765

Thr Gln Arg Pro Gly Glu Pro Glu Glu Gly Ala Arg His Gln His Leu
770 775 780

Arg Leu Ser Ser Ser Ser Gly Arg Leu Arg Tyr Thr Ala Thr Ala Glu
785 790 795 800

Asp Ser Ser Ser Ser Thr Ser Ser Asp Ser Leu Gly Gly Gly Tyr Cys
Page 15

805

810

815

Gly Ala Arg Pro Glu Ser Ser Leu Thr His Pro His His His Val Leu
 820 825 830

Gln Pro His Leu Pro Arg Lys Val Asp Thr Ala Ala Gln Thr Asn Ser
 835 840 845

Arg Leu Ala Arg Pro Thr Arg Leu Ser Leu Gly Asp Pro Lys Ala Ser
 850 855 860

Thr Leu Pro Arg Val Arg Glu Gln Gln Gln Gln Gln Gln Ser Ser Leu
 865 870 875 880

His Pro Pro Glu Pro Lys Ser Pro Gly Glu Tyr Val Asn Ile Glu Phe
 885 890 895

Gly Ser Gly Gln Pro Gly Tyr Leu Ala Gly Pro Ala Thr Ser Arg Ser
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Ser Pro Ser Val Arg Cys Pro Pro Gln Leu His Pro Ala Pro Arg Glu
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Glu Thr Gly Ser Glu Glu Tyr Met Asn Met Asp Leu Gly Pro Gly Arg
 930 935 940

Arg Ala Thr Trp Gln Glu Ser Gly Gly Val Glu Leu Gly Arg Ile Gly
 945 950 955 960

Pro Ala Pro Pro Gly Ser Ala Thr Val Cys Arg Pro Thr Arg Ser Val
 965 970 975

Pro Asn Ser Arg Gly Asp Tyr Met Thr Met Gln Ile Gly Cys Pro Arg
 980 985 990

Gln Ser Tyr Val Asp Thr Ser Pro Val Ala Pro Val Ser Tyr Ala Asp
 995 1000 1005

Met Arg Thr Gly Ile Ala Ala Glu Lys Ala Ser Leu Pro Arg Pro
 1010 1015 1020

Thr Gly Ala Ala Pro Pro Pro Ser Ser Thr Ala Ser Ser Ser Val
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Thr Pro Gln Gly Ala Thr Ala Glu Gln Ala Thr His Ser Ser Leu
 Page 16

1040

1045

1050

Leu Gly Gly Pro Gln Gly Pro Gly Gly Met Ser Ala Phe Thr Arg
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Val Asn Leu Ser Pro Asn His Asn Gln Ser Ala Lys Val Ile Arg
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Ala Asp Thr Gln Gly Cys Arg Arg Arg His Ser Ser Glu Thr Phe
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Ser Ala Pro Thr Arg Ala Gly Asn Thr Val Pro Phe Gly Ala Gly
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<212> PRT

<213> Mus musculus

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Lys Trp Arg Ser Lys Ala Gly Ala Pro Lys Arg Val Ile Ala Leu Asp
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Ile Ala Leu Tyr Thr Lys Asp Glu Tyr Phe Ala Val Ala Ala Glu Asn
115 120 125

Glu Gln Glu Gln Glu Gly Trp Tyr Arg Ala Leu Thr Asp Leu Val Ser
130 135 140

Glu Gly Arg Ser Gly Glu Gly Gly Ser Gly Thr Thr Gly Gly Ser Cys
145 150 155 160

Ser Ala Ser Leu Pro Gly Val Leu Gly Gly Ser Ala Gly Ala Ala Gly
165 170 175

Cys Asp Asp Asn Tyr Gly Leu Val Thr Pro Ala Thr Ala Val Tyr Arg
180 185 190

Glu Val Trp Gln Val Asn Leu Lys Pro Lys Gly Leu Gly Gln Ser Lys
195 200 205

Asn Leu Thr Gly Val Tyr Arg Leu Cys Leu Ser Ala Arg Thr Ile Gly
210 215 220

Phe Val Lys Leu Asn Cys Glu Gly Pro Ser Val Thr Leu Gln Leu Asn
225 230 235 240

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245 250 255

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260 265 270

Asp Ser Val Val Ala Gln Asn Ile His Glu Thr Ile Leu Glu Ala Met
275 280 285

Lys Ala Leu Lys Glu Leu Phe Glu Phe Arg Pro Arg Ser Lys Ser Gln
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Ser Ser Gly Ser Ser Ala Thr His Pro Ile Ser Val Pro Gly Ala Arg
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325 330 335

Arg Arg Ser Arg Thr Asp Ser Leu Ala Ala Thr Pro Pro Ala Ala Lys
340 345 350

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Ala Gly Gly Ala Gly Thr Ala Gly Gly Arg Pro Met Ser Val Ala Gly
370 375 380

Ser Pro Leu Ser Pro Gly Pro Val Arg Ala Pro Leu Ser Arg Ser His
385 390 395 400

Thr Leu Ser Ala Gly Cys Gly Gly Arg Pro Ser Lys Val Thr Leu Ala
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Pro Ala Gly Gly Ala Leu Gln His Ser Arg Ser Asn Ser Met Pro Val
420 425 430

Ala His Ser Pro Pro Ala Ala Thr Ser Pro Gly Ser Leu Ser Ser Ser
435 440 445

Ser Gly His Gly Ser Gly Ser Tyr Pro Leu Pro Pro Gly Ser His Pro
450 455 460

His Leu Pro His Pro Leu His His Pro Gln Gly Gln Arg Pro Ser Ser
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Gly Ser Ala Ser Ala Ser Gly Ser Pro Ser Asp Pro Gly Phe Met Ser
485 490 495

Leu Asp Glu Tyr Gly Ser Ser Pro Gly Asp Leu Arg Ala Phe Ser Ser
500 505 510

His Arg Ser Asn Thr Pro Glu Ser Ile Ala Glu Thr Pro Pro Ala Arg
515 520 525

Asp Gly Ser Gly Gly Glu Leu Tyr Gly Tyr Met Ser Met Asp Arg Pro
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Leu Ser His Cys Gly Arg Pro Tyr Arg Arg Val Ser Gly Asp Gly Ala
545 550 555 560

Gln Asp Leu Asp Arg Gly Leu Arg Lys Arg Thr Tyr Ser Leu Thr Thr
565 570 575

Pro Ala Arg Gln Arg Gln Val Pro Gln Pro Ser Ser Ala Ser Leu Asp
580 585 590

Glu Tyr Thr Leu Met Arg Ala Thr Phe Ser Gly Ser Ser Gly Arg Leu
595 600 605

Cys Pro Ser Phe Pro Ala Ser Ser Pro Lys Val Ala Tyr Asn Pro Tyr
610 615 620

Pro Glu Asp Tyr Gly Asp Ile Glu Ile Gly Ser His Lys Ser Ser Ser
625 630 635 640

Ser Asn Leu Gly Ala Asp Asp Gly Tyr Met Pro Met Thr Pro Gly Ala
645 650 655

Ala Leu Arg Ser Gly Gly Pro Asn Ser Cys Lys Ser Asp Asp Tyr Met
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Pro Met Ser Pro Thr Ser Val Ser Ala Pro Lys Gln Ile Leu Gln Pro
675 680 685

Arg Leu Ala Ala Ala Leu Pro Pro Ser Gly Ala Ala Val Pro Ala Pro
690 695 700

Pro Ser Gly Val Gly Arg Thr Phe Pro Val Asn Gly Gly Gly Tyr Lys
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Leu Pro Asn Gly Asp Tyr Leu Asn Lys Ser Pro Ser Glu Ala Gly Thr
755 760 765

Ala Gly Thr Pro Pro Asp Phe Ser Ala Ala Leu Arg Gly Gly Ser Glu
770 775 780

Gly Leu Lys Gly Ile Pro Gly His Cys Tyr Ser Ser Leu Pro Arg Ser
785 790 795 800

Tyr Lys Ala Pro Cys Ser Cys Ser Gly Asp Asn Asp Gln Tyr Val Leu
805 810 815

Met Ser Ser Pro Val Gly Arg Ile Leu Glu Glu Glu Arg Leu Glu Pro
820 825 830

Gln Ala Thr Pro Gly Ala Gly Thr Phe Gly Ala Ala Gly Gly Ser His
835 840 845

Thr Gln Pro His His Ser Ala Val Pro Ser Ser Met Arg Pro Ser Ala
850 855 860

Ile Gly Gly Arg Pro Glu Gly Phe Leu Gly Gln Arg Cys Arg Ala Val
865 870 875 880

Arg Pro Thr Arg Leu Ser Leu Glu Gly Leu Gln Thr Leu Pro Ser Met
885 890 895

Gln Glu Tyr Pro Leu Pro Thr Glu Pro Lys Ser Pro Gly Glu Tyr Ile
900 905 910

Asn Ile Asp Pro Gly Glu Ala Gly Thr Arg Leu Ser Pro Pro Ala Pro
915 920 925

Pro Leu Leu Ala Ser Ala Ala Ser Ser Ser Ser Leu Leu Ser Ala Ser
930 935 940

Ser Pro Ala Ser Ser Leu Gly Ser Gly Thr Pro Gly Thr Ser Ser Asp
945 950 955 960

Ser Arg Gln Arg Ser Pro Leu Ser Asp Tyr Met Asn Leu Asp Pro Ser
965 970 975

Ser Pro Lys Ser Pro Lys Pro Ser Thr Arg Ser Gly Asp Thr Val Gly
980 985 990

Ser Met Asp Gly Leu Leu Ser Pro Glu Ala Ser Ser Pro Tyr Pro Pro
995 1000 1005

Leu Pro Pro Arg Pro Ser Thr Ser Pro Ser Ser Leu Gln Gln Pro
1010 1015 1020

Leu Pro Pro Ala Pro Gly Asp Leu Tyr Arg Leu Pro Pro Ala Ser
1025 1030 1035

Ala Ala Thr Ser Gln Gly Pro Thr Ala Gly Ser Ser Met Ser Ser
1040 1045 1050

Glu Pro Gly Asp Asn Gly Asp Tyr Ser Glu Met Ala Phe Gly Val
1055 1060 1065

Ala Ala Thr Pro Pro Gln Pro Ile Val Ala Pro Pro Lys Pro Glu
1070 1075 1080

Gly Ala Arg Val Ala Ser Pro Thr Ser Gly Leu Lys Arg Leu Ser
1085 1090 1095

Leu Met Asp Gln Val Ser Gly Val Glu Ala Phe Leu Gln Val Ser
1100 1105 1110

Gln Pro Pro Asp Pro His Arg Gly Ala Lys Val Ile Arg Ala Asp
1115 1120 1125

Pro Gln Gly Gly Arg Arg Arg His Ser Ser Glu Thr Phe Ser Ser
1130 1135 1140

Thr Thr Thr Val Thr Pro Val Ser Pro Ser Phe Ala His Asn Ser
1145 1150 1155

Lys Arg His Asn Ser Ala Ser Val Glu Asn Val Ser Leu Arg Lys
1160 1165 1170

Ser Ser Glu Gly Ser Ser Thr Leu Gly Gly Gly Asp Glu Pro Pro
1175 1180 1185

Thr Ser Pro Gly Gln Ala Gln Pro Leu Val Ala Val Pro Pro Val
1190 1195 1200

Pro Gln Ala Arg Pro Trp Asn Pro Gly Gln Pro Gly Ala Leu Ile
 1205 1210 1215

Gly Cys Pro Gly Gly Ser Ser Ser Pro Met Arg Arg Glu Thr Ser
 1220 1225 1230

Val Gly Phe Gln Asn Gly Leu Asn Tyr Ile Ala Ile Asp Val Arg
 1235 1240 1245

Gly Glu Gln Gly Ser Leu Ala Gln Ser Gln Pro Gln Pro Gly Asp
 1250 1255 1260

Lys Asn Ser Trp Ser Arg Thr Arg Ser Leu Gly Gly Leu Leu Gly
 1265 1270 1275

Thr Val Gly Gly Ser Gly Ala Ser Gly Val Cys Gly Gly Pro Gly
 1280 1285 1290

Thr Gly Ala Leu Pro Ser Ala Ser Thr Tyr Ala Ser Ile Asp Phe
 1295 1300 1305

Leu Ser His His Leu Lys Glu Ala Thr Val Val Lys Glu
 1310 1315 1320

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 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
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 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 5

Thr Arg Arg Ser Arg Thr Glu Ser Ile Thr Ala Thr Ser Pro Ala
 1 5 10 15

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 <211> 15
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 <213> Homo sapiens

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<400> 6

Ser Phe Arg Val Arg Ala Ser Ser Asp Gly Glu Gly Thr Met Ser
1 5 10 15

<210> 7

<211> 15

<212> PRT

<213> Homo sapiens

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<222> (8)..(8)

<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 7

Gly Cys Arg Arg Arg His Ser Ser Glu Thr Phe Ser Ser Thr Pro
1 5 10 15

<210> 8

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 8

Gly Gly Arg Arg Arg His Ser Ser Glu Thr Phe Ser Ser Thr Thr
1 5 10 15

<210> 9

<211> 15

<212> PRT

<213> Mus musculus

<220>

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<222> (8)..(8)

<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 9

Gly Cys Arg Arg Arg His Ser Ser Glu Thr Phe Ser Ala Pro Thr
1 5 10 15

<210> 10

<211> 15
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 <213> Mus musculus

 <220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 10

Gly	Gly	Arg	Arg	Arg	His	Ser	Ser	Glu	Thr	Phe	Ser	Ser	Thr	Thr
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<210> 11
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<400> 11

Cys	Arg	Arg	Arg	His	Ser	Ser	Glu	Thr	Phe	Ser	Ser	Thr
1				5					10			